[illegible]LAB [illegible] GOOD MORNING

SL-II MC-1144/1
Time: 02:00 CDT, 25:02:00 GMT
6/18/73

PAO Good morning, this is Skylab Control at 7 hours Greenwich mean time. Skylab is over the United States, north of the Great Lakes at this time, in a short LOS between the Texas tracking station and the Bermuda station. Cap Com Astronaut Henry Hartsfield plans to send a wake-up call to the crew at Bermuda. Today's flight plan includes a scheduled 3 hours and 51 minutes of Apollo telescope mount operation by Science Pilot, Joe Kerwin and Pilot, Paul Weitz. It also includes some medical experiment runs - M092, the lower body negative pressure and the M171, the metabollic studies, with Joe Kerwin as the subject, Pete Conrad as the observer. Then in the early afternoon, about 2 hours has been set aside for preliminary preparations for tomorrow's extravenicular activity to change out the film canisters in the Apollo telescope mount. We're a few seconds away from acquisition at Bermuda. We'll stand by for the wake-up call.

CC Skylab, Houston; good morning.

CDR Good morning.

SPT Where were you calling from?

CC Where am I? Oh, I'm at Houston still.

SPT Houston!

CC How's everything up there this morning?

CDR I don't know. We just woke up. My little buzzer went off about 2 minutes before you called.

CC Roger, we've got about 4 more minutes with you here through Bermuda.

CDR Okay.

CC Skylab, Houston. About 1 minute to LOS. We'll be coming up on Canaries at 12 with a recorder dump.

SPT Okay.

PAO This is Skylab Control at 7 hours 8 minutes Greenwich mean time. Bermuda has loss of signal with Skylab. In about 2-1/2 minutes the station at the Canary Islands will acquire. We'll stay up through this short LOS, and wait for acquisition at Canaries.

END OF TAPE

LONGEST SPACE FLT

SL-II MC-1145/1
Time: 02:09 CDT 25:07:09 GMT
6/18/73

CC Skylab Houston, through Canary 9-1/2 minutes.

CC Skylab Houston. All your pads should be on board now.

CC Skylab Houston. Before you get too wrapped up in that flight plan, I've got a few words about it here. You've probably noticed on there that we had a JOP 13 scheduled. We're going to have to scrub that. We scrubbed it for several reasons. First off the premission (garble) target data wasn't available to us because of the delayed launch. So we were unable to select a suitable target, generate the pads and get a run in the simulator last night. Also the scheduling of the canister fine Sun sensor, acquisition Sun sensor alignment compilation that we normally do on (garble) 4 was impossible so that we could get the required pointing accuracy. I guess to sum it up, we just couldn't get it all pulled together with enough confidence to ensure the success of the JOP, so we thought the best thing to do was to scrub it. And we give you our appologies. In place of it, we will be doing open housekeeping.

SPT Understand.

CC Skylab Houston, 1 minute to LOS. We'll be coming up on Honeysuckle at 56. And in about 2 minutes from now, at 7:22 you will become the new world champs for longest space flight.

SPT Okay, thanks for the note, cause actually we are all up at BMMD halfway getting weighed.

CC Roger, copy.

PAO This is Skylab Control at 7 hours 22 minutes Greenwich mean time. Canary Island tracking station has had loss of signal. The next station to acquire will be Honeysuckle in about 34 minutes. Skylab has now equaled, and in just about a few more seconds will exceed the Soyuz 11 record for manned space flight. As you heard Capcom Hartsfield inform the crew that they will be the new world's champions for manned space flight. Duration of the Soyuz 11 mission was 570 hours 22 minutes. The Skylab II crew has now exceeded that mark. The Commander Pete Conrad has now logged 1,077 hours and 10 minutes of space flight. We'll come back up just prior to the Honeysuckle pass. At 7 hours 24 minutes, this is Skylab Control.

END OF TAPE

DESIRE TO SEND CREWS RESPECTS & GOOD LUCK TO COSMONAUTS

SL-II MC-1146/1
Time: 02:55 CDT, 25:07:55 GMT
6/18/73

PAO This is Skylab Control 7 hours 55 minutes Greenwich mean time. Skylab coming up on acquisition at the Honeysuckle, Australia tracking station. The crew having breakfast and in the post sleep activities for the day. At the time Skylab exceeded the Soyuz 11 record for manned space flight, Skylab was over the country of Nigeria, the continent of Africa. We'll stand by for this pass through Honeysuckle.

CC Skylab, Houston through Honeysuckle 9 minutes.

PLT Roger.

CDR Hey, Hank. You still there?

CC Affirmative.

CDR About - having Tom Stafford or Deke relay to the Russian Cosmonauts our respects and, at this point, in our flight to them and their comrades and wish them good luck from us in the future.

CC Okay, I sure will, Pete.

CDR Thank you.

CC Skylab, Houston; 1 minute to LOS. Hawaii at 160.

PLT Okay.

PAO This is Skylab Control at 8 hours 6 minutes Greenwich mean time. Skylab is beyond the range of Honeysuckle now and we'll be acquired by the Hawaii station in about 9-1/2 minutes. During this pass, Skylab Commander, Pete Conrad requested that Johnson Space Center Director of Flight Crew Operations, Deke Slayton, or the Deputy Director, Brigadier General Thomas Stafford contact the Cosmonaut Corp in the Soviet Union pass on the Skylab 2's respect to the cosmonauts and their wishes to them for good luck in the future. This being on the occasion of Skylab crew exceeding the record of Soyuz 11 of 570 hours 22 minutes. The Soyuz 11 manned mission ended tragically, when because of a improperly secured hatch in the re-entry module. The three cosmonauts died during re-entry. We'll come back up just prior to Hawaii acquisition. At 8 hours 8 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-1I MC-1147/1
Time: 03:15 CDT 25:08:15 GMT
6/16/73

PAO This is Skylab Control at 8 hours 15 minutes Greenwich mean time. We're standing by for acquisition at Hawaii.

CC Skylab Houston. Through Hawaii 9-1/2 minutes.

PLT Roger Hank.

CC And Skylab I've got a little small changes to each one of your detail pads, and one addition to the remarks at the end of this flight plan.

PLT Go ahead.

CC Okay, for the CDR on his details, we want to delete the momentum inhibit at 13:20. And at 22:10 you see a reference to T003 filters. We'd like to pull out the filter 5 and move it up to 19:30, the rest of them remain at 22:10.

PLT Okay.

CC And for the SPT, we want to delete his ATM at 14:00. That's the - I believe that JOP 13. And for the PLT details, we want to delete the momentum enable at 15:00.

CDR Roger.

CC And, let's see, we've already deleted a JOP 13 in the flight plan, and replaced it with housekeeping general. And at this summary, we left out a South Atlantic anomaly. There is one of them at 13:41 to 14:11.

CDR Okay.

CC That's all of those. I do have one change to that 509 checklist. I can wait until later if you like.

PLT I'm going to go get the checklist right now.

PLT Go ahead Hank.

CC Okay, on page 16-1.

PLT Stand by.

PLT Okay.

CC To step 2 add mode direct, and the reason we're doing this is to configure the (garble) deplete valve.

PLT (garble) C and D power off, mode direct.

CC Roger. And that's all the changes. I do have one comment for the CDR. He's got housekeeping 60 Tango set up, it's the ATM C and D filter replacement. The checklist says that the filters are in A2 in the CSM, but if you have already done the day 25 transfer or if they are done - they'll be in a - say again?

CDR They're in A 5. I know where they are, I get the transfers.

SL-11 MC-1147/2
Time: 03:15 CDT 25:08:15 GMT
6/18/73

CC Okay. I just wanted to remind you.
CDR Hank, to the people that are going to analyze the stowage, or analyze those parts where they come back. The one that was changed out initially will have one red stripe of tape on it, and the one this morning will have two stripes of red tape on it. Okay?
CC Okay, copy.

END OF TAPE

SL-11 MC-1148/1
Time: 03:20 CDT 25:08:20 GMT
6/18/73

CC Skylab, Houston. One minute to LOS. Goldstone at 28.

PAO This is Skylab Control at 8 hours and 26 minutes Greenwich mean time. Hawaii has lost its signal. However, Goldstone will pick up Skylab in about a minute and a half. We'll stay up through this short LOS. In the control center, Flight Director, Neil Hutchinson is briefing his replacement. The on-coming Flight Director is Milton Windler. On the Cap Com console, Astronaut Bob Crippen will relieve Astronaut Hank Hartsfield. Neil Hutchinson estimates that his Change-of-shift news conference will begin at 4:00 a.m. central daylight time in the JSC news center. Four a.m. central daylight for the Change-of-shift news conference with Flight Director Neil Hutchinson. We'll stand by for acquisition at Goldstone and Skylab's pass over the United States.

CC Skylab, Houston through Goldstone 6-1/2 minutes.

PLT Roger.

CC Skylab, Houston in 1 minute to LOS. Bermuda at 39.

PLT Okay.

END OF TAPE

SL-II MC-1149/1
Time: 03:36 CDT 25:08:36 GMT
6/18/73

PAO This is Skylab Control at 8 hours 36 minutes Greenwich mean time. Skylab has passed out of range of Goldstone's antennas, but Bermuda will be picking up Skylab in just under 3 minutes. We'll keep the line up during this short LOS.

CC Skylab, Houston, through Bermuda 8-1/2 minutes.

CDR Roger, Houston.

CC Skylab, Houston, 1 minute to LOS. Canaries at 49.

PLT Roger.

PAO This is Skylab Control at 8 hours 48 minutes Greenwich mean time. Bermuda has loss of signal. Canaries will acquire in less than a minute. And then there is overlapping coverage from Ascension on this pass. We'll continue to stand by.

CC Skylab, Houston, AOS Canaries, or correction, Canaries for 16 minutes.

PLT Morning, Crip.

CC Morning, Sir.

END OF TAPE

SL-II MC-1150/1
Time: 03:50 CDT, 25:08:50 GMT
6/18/73

SPT Good morning, Crip.
CC Morning, sir.
CDR Hello, Crip.
CC Good morning, Pete.
CC You guys sound rather jovial this morning.
CDR Yeah, I think when we start EVA prep tonight we figure it's like a count down.
CC I believe so. I didn't know whether you were going to sound that jovial after that EVA message we sent you.
CDR It's just the PLT. He's grumbling.
PLT I haven't read it yet. Maybe I'll give you another call after I read it.
CC Okey doke.
CDR Housekeeping 60 Tango is complete - both the filters are back in A-5.
CC Copy.
CDR Day 148 1 is the day - 169th.
SPT Houston, SPT. May I INHIBIT momentum dump early? Namely, now?
CC Stand by 1.
CC You're GO on that Joe.
SPT Thank you.
CDR Say, Crip, can you get them to explain to me what's a DAA2/1?
CDR Now what's in this survey - the 2 minute survey? What do you want me to do?
CC Stand by 1, Pete.
CC CDR, Houston.
CDR Go ahead.
CC Okay, on page 6-2 of your evaluation experiments checklist, in the third paragraph down, it addresses a back-to-back survey. And that's what this is.
CDR I got it. Back to back. Okay.
CC Okay, is that enough info, Pete?
CDR That's enough.
PAO This is Skylab Control at 8 hours 57 minutes Greenwich mean time. Flight Director Neil Hutchinson is ready to begin the Change-of-shift briefing in the news center. We'll take the line down now and tape any remaining air-to-ground communications during the Ascension pass - play that back at the end of the news conference. To repeat: the Change-of-shift news conference with Flight Director Neil Hutchinson, is ready to begin in the JSC news center. At 08:58 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-1X MC-1151/1
Time: 04:12 CDT 25:09:12 GMT
6/18/73

PAO This is Skylab Control at 9 hours 13 minutes Greenwich mean time. Skylab is 18 minutes away from acquisition at Carnarvon, and there is overlapping coverage from the Honeysuckle station. We accumulated 2 minutes 18 seconds of conversation at Ascension on tape during the change of shift news conference. We'll play that tape now.

CC Skylab Houston. We're into the Ascension portion of our pass, and we are doing a data recorder dump at this pass.

CDR Hey, Crip, CDR.

CC Go CDR.

CDR On page 6-3 on that checklist, would you verify that by just doing speaker (garble)power on up and intercom key on that in fact will voice record on DSC or on system B,do I have to do anything to make sure I get this data on 63 rear is that a recording the command module before and I just want to verify that.

CC Okay, we're checking it.

CDR Thank you.

CC CDR Houston. We can confirm that will record okay in the command module on the DSC. And the DSC is on, and you probably found that the log for that back to back survey was on page 9-8 of the CSM systems checklist.

CDR Yeah, I know where that is. I think maybe I got to take the PLT intercom switch to intercom.

CC I've got that ICOM checking.

CDR Now that will put it on B channel you know for the SWS but i'm not sure what goes on (garble).

CC Roger. What you're trying to do is record it on the DSC.

CDR Okay, (garble)

CDR Are you there, Houston.

CC Affirm.

CDR The other thing I'd like to ask you is on these places by the window, if they want the sensor located, do they want the window covers on or the window covers off?

CC We'll check that.

CDR Yeah, our configuration, of course, right now you want the covers on.

CC We'd like the window covers removed if we could.

CDR Okay, take the window covers off.

CC Skylab, Houston. LOS in 1 minute. Carnarvon at 9:32, 09:32.

CDR Okay, be there.

SL-II MC-1151/2
Time: 04:12 CDT 25:09:12 GMT
7/18/73

PAO This is Skylab Control. That's the end of the tape. Skylab still 15-1/2 minutes away from Carnarvon. We'll come back up then. At 9 hours 16 minutes, this is Skylab Control.

END OF TAPE

AURORA AUSTRALIS

SL-II MC-1152/1
Time: 04:30 CDT, 25:09:30 GMT
6/18/73

PAO This is Skylab Control at 9 hours 30 minutes Greenwich mean time. We're in contact at Carnarvon.

PLT Refrigeration set for the detail parameter is real time for comparison?

CC If it's not too much trouble, we'd appreciate it.

PLT Okay, I'm just finishing cleaning up in the head. I'm captain today. I'll be with you in about 2 minutes.

CC Fine and dandy.

CDR We've got the double feature on right now, Crip. We got the Moon. Right underneath it we have another night, - I guess you gotta call it.

CC Sounds beautiful. Nice big full moon.

CDR Yep, it's getting a little lopsided. It was full a day or so ago. This is great ice cream weather tonight. Aurora Australis I've been told by my more scientific compatriots.

CC Fantastic.

CC What color are the Southern Lights?

CDR Say again.

CC What color are they? Just white?

CDR No, they're kind of greenish.

CDR Very pale, pale green.

CDR Say, another thing for you to put into the hopper today. The ground has been strangely silet about the TV. We of course can't put it out. The SO73, - that's already added to EVA checklist, but I'd like them to know what they'd like me to do with it.

CC Pete, I didn't really get all of that. Are you talking about the TV for EVA?

CDR Yeah.

CDR Did you get my last "yes"?

CC Say again.

CDR I say the answer to that was yes.

CC Rog. I'll try to get the latest dope on it right now.

CDR Okay.

PLT Okay, Crip. Are you ready for the refrigeration system (garble)?

CC Rog. Go ahead.

PLT I'll give you TCS first. All right?

CC Go.

PLT Workshop temperature indicates 76;, pressure about 5.4, duct fall in 1 is - I indicated, about 520, and 510 in 2, and 3 in that 550.

PLT On the refrigeration system - the freezer started. The heat sink outlet - oh, I forgot, wait a minute.

PLT Mila Meat sink outlet was minus 18. The (garble) freezer indicates about minus 13. The wardroom freezer - 1 indicates minus 14, 2, minus 11. The stowage freezers 1 showed minus 8, 2, minus 8, 3, minus 6. And the (garble) primary 1 inlet 342. The food (garble) 41. The (garble) number 1 reads 44, 2 reads 45, 3 reads 44. All the pumps in AUTO and I remember that does it. Is that right?

CC That does it. Thank you very much. Appreciate it, Paul.

PLT Roger.

CC CDR, Houston.

CDR Say again.

CC Rog. Regarding the TV. I guess - it's our understanding that you have offered to take the TV outside. We're putting it as strictly optional on your part. We do have a message down here that we can send you up regarding the procedures for taking it outside. If you do not want to take it outside and you want EV-3 to use it inside at the STS area, that would be fine also.

CDR Okay, send us the message for taking it outside, and we'll smoke that over today while we're organizing the lock and figuring out what we're going to do with it.

CC Okay, we'll take a look at it. Also, regarding the EVA procedures. We would think that it would be wise, perhaps to go over those this afternoon - -

END OF TAPE

CC - - we'll take a look at it. Also regarding the EVA procedures, we would think that it would be wise perhaps to go over those this afternoon over the air. I would like to propose some time in your - at the end of your pre EVA prep. We have about 3 passes in there, starting at about 18:10. How would you take to discussing it during those periods?

SPT That's fine.

CC Okay, we'll get the proper people lined up.

CC Skylab Houston. LOS in 1 minute. Hawaii at 09:56, 56.

CDR Roger.

PAO This is Skylab Control at 9 hours 40 minutes Greenwich mean time. Honeysuckle has had loss of signal. Skylab will next be acquired by Hawaii in about 15 minutes. There was a discussion on this pass concerning the use of television for tomorrow's extra vehicular activity. Pete Conrad was informed that it was optional with the crew whether to take the camera outside or have Joe Kerwin operate it from inside the vehicle through the windows in the multiple docking adapter in the command module. He reported that they will consider taking it outside, and today, and come up with an answer later whether it will be an inside or an outside television transmiss. . We'll come back up just prior to the Hawaii pass. At 9 hours 41 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

CC - - we'll take a look at it. Also regarding the EVA procedures, we would think that it would be wise perhaps to go over those this afternoon over the air. I would like to propose some time in your - at the end of your pre EVA prep. We have about 3 passes in there, starting at about 18:10. How would you take to discussing it during those periods?

SPT That's fine.

CC Okay, we'll get the proper people lined up.

CC Skylab Houston. LOS in 1 minute. Hawaii at 09:56, 56.

CDR Roger.

PAO This is Skylab Control at 9 hours 40 minutes Greenwich mean time. Honeysuckle has had loss of signal. Skylab will next be acquired by Hawaii in about 15 minutes. There was a discussion on this pass concerning the use of television for tomorrow's extra vehicular activity. Pete Conrad was informed that it was optional with the crew whether to take the camera outside or have Joe Kerwin operate it from inside the vehicle through the windows in the multiple docking adapter in the command module. He reported that they will consider taking it outside, and today, and come up with an answer later whether it will be an inside or an outside television transmiss. . We'll come back up just prior to the Hawaii pass. At 9 hours 41 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-1154/1
Time: 04:54 CDT 25:09:54 GMT
6/18/73

PAO This is Skylab Control at 9 hours 54 minutes Greenwich mean time. Skylab coming up within range of Hawaii now. The duration of this contact will be about 4 minutes. We'll stand by.

CC Skylab Houston, AOS Hawaii 4 minutes.

CC PLT Houston. If you man the ATM console, I've got a SAS update for you.

PLT Okay. I'm not there, yet. I'm still making changes to EVA checklist.

CC You may not make it up there at that rate. No sweat, when you get a chance I can give them to you, - or I can give them to you over the states.

PLT Okay. Let's do that, Crip. I got a couple more to make here, then I'll slither on up.

CC Okey-doke.

PLT Tell you one thing, I'm going to this EVA Checklist back with us.

CC I've got one down here that should look pretty much like that one.

PLT I hope you can figure out what we're doing then.

CC That's why I want Rusty to come in this afternoon.

SC And this clock is counting on D008.

CC Roger.

CC Skylab, Houston. 1 minute until LOS. We'll have you again at Goldstone at 10:09, 10:08.

CC PLT, Houston. Are you saving, are you making note, of the message headers so that we can ensure that you have received all of them?

SC Negative.

SC You still there, let me give you a quick rundown on what I've got.

CC Okay. I don't really think we're going to have time for them. Why don't we wait and try to get that later, if we can, Paul?

SC Okay, because I've been cutting and pasting and throwing away the scraps as I've been going, Crip.

CC Okay. We're just trying to figure out how we could go over them and make sure you had all the changes.

SC I suggest you pick out the important changes and ask me if I saw them and incorporated them.

CC Okay.

SC That's for the next flight to work on. How to handle that message traffic, cause we need some other

SL-II MC-1154/2
Time: 04:54 CDT, 23:09:54 GMT
8/18/73

stuff up here to do it with.

CC Roger.

PAO This is Skylab Control at 10 hours 1 minute Greenwich mean time. Hawaii has loss of signal. We'll pick up Goldstone in about 6 minutes. At 10 hours 1 minute Greenwich mean time, this is Skylab Control.

END OF TAPE

D * 21120

LIVE ATM

SL-II MC-1155/1
Time: 09:05 CDT 25:10:05 GMT
8/18/73

PAO This is Skylab Control at 10 hours 5 minutes Greenwich mean time. Skylab coming up beginning a pass over the United States with initial acquisition at Goldstone. Pete Conrad involved with D008. He's measuring radiation in the spacecraft. Pilot Paul Weitz should be beginning the first Apollo telescope mount run of the day. And the Science Pilot Joe Kerwin is calibrating the body mass measurement device. We'll stand by for the stateside pass.

CC Skylab, Houston. We're AOS, Goldstone, for 6 minutes.

SC Okay, Crip. We'll be looking at the (garble) as soon as I get (garble).

CC Rog. There's no big hurry. Not very exciting update.

SC Okay, go ahead with the changes to the pad, Bob.

CC Rog. It's just an update. The solar activity has been low. Three subflares have been reported, none with X-rays, from active regions 37, 43, and a new active region 47, which is located at 26 slant 1.0. That's where the sublfares have been from.

SC Okay, thank you. Ready for the TV downlink now?

CC Standby 1 on that. And we do have small surges from active region 47, and filament 82 has been active, and appears to be slowly dissipating. And Paul it'll be six minutes before we're ready for the TV. We're going to get that over Mila.

PLT Okay.

CC Skylab, Houston. One minute 'til LOS. We'll have - drop you out for a couple minutes and have you again at 14.

PLT Okay, I got a flare alarm here. It's just barely slipping up over the - what we got set on it, but I don't see anything anywhere. Might be a little something in active region 37, I guess.

CC Okay, we're looking at it. You're up to the vicinity of the Horn, also, it appears.

PLT Okay, we're going to (garble) 43, here. I was reading it wrong.

PLT Right.

PAO This is Skylab Control at 10 hours 13 minutes Greenwich mean time. Goldstone has loss of signal and there's about a minute and a half gap between Goldstone and the Texas station. We did have a couple of minutes of real-time Apollo telescope mount television from the Goldstone station. We expect to receive some more real-time ATM television from the Merritt Island tracking station. And we'll be acquiring at Merrit Island in about a minute. We'll stand by.

END OF TAPE

CC Skylab, Houston. We're AOS over Mila for about 10 minutes. And PJ, we blew it. You were in the horn, that's why you had the alarm.
SC Okay.
SC Tell me when they're ready, and I'll start doing the TV downlink that Pete (garble).
CC Roger.
CC Okay, Paul. We're receiving TV now, you can go ahead and go through your sequence.
CC Uh, Paul, we're having a little problem with our TV, could you hold up on your sequence for about 30 seconds, I'll give you a GO (garble).
SC Okay.
CC And PJ, while you were looking at that white light coronagraph, it was, - it should be obvious to you where that piece of contamination is that we were talking about.
SC Yeah, I see it.
SC And Bob, why don't you have'em work up what o'clock position that is, with me looking in there from the foot restraints.
CC Will do.
SC Thank you.
CC Okay, PJ. We're ready for you to commence the TV sequence once more.
SC Okay.
SC Hey, Crip. You guys get your signal independent of ours, is that right? In other words, our settings on our monitor have no effect over those TV pictures you get on the ground, is that correct?
CC Your selection is - your selection of monitor is what we get.
SC I understand that. I'm talking about the contrast and brightness adjustments on the monitor itself.
CC That should not have any effect, that only controls your monitor.
SC Okay.
SC Houston, I'm going to go ahead and enable MOMENTUM DUMP now. Is that okay?
CC Stand by. You're GO for enabling.
SC Okay.
CC Skylab, Houston. LOS in 1 minute. Ascension at 10:36, 36.
SC Roger.
SC Haven't you got startracker update enabled?
CC I'll check that; we had it disabled last night.

SC I figured that. I was bent over to (garble) and this (garble) didn't look bad.
SC I'm looking for astar now.
CC Okay. The word is that we do have it disabled and you need to enable it, I guess.
SC Okay.
CC That's both control and update.
SC All right.
PAO This is Skylab Control at 10 hours and 27 minutes Greenwich mean time. Bermuda has loss of signal. Skylab will next be acquired by the Ascension Island tracking station in about 7-1/2 minutes. At 10 hours 28 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MO-1157/1
Time: 05:33 CDT, 25:10:33 GMT
6/18/73

PAO This is Skylab Control at 10 hours 33 minutes Greenwich mean time. Skylab coming up on acquisition at the Ascension Island station. We'll stand by.

CC Skylab, Houston. AOS, Ascension for 5 minutes.

SC Roger.

CC PLT, Houston. We show that the new Z update is not enabled at this time. Would you like to do it, or would you like us to do it?

SC It worked.

CC Roger.

SC How's that look?

CC That looks good.

SC That's good. I couldn't remember if I keyed in ENABLE or INHIBIT.

CC Okay. It's enabled now.

SC I sure like this system.

CC I'm glad you're fond of it.

CC SPT, Houston. If you have a moment, I'd like to talk about one of your housekeeping periods. If not I'll get you at next station pass.

SC Okay. If you don't have to, Crip, that's good, because he's still tied up with the (garble) cal.

CC Roger.

SC This is another fun thing.

CC Thought you'd like that.

SC Did you call SPT?

CC Uh, SPT, Houston. Roger. If you've got a minute I wanted to tell you about this housekeeping period you have coming up prior to your ATM run. We wanted you to run a little condensate tank MALF for us. If not I can tell you about it over Carnarvon.

SC I'll talk to you at Carnarvon, Crip.

CC Okay.

CC SPT, no need to acknowledge, but there is a teleprinter pad regarding this MALF procedure in the teleprinter at this time and we'll talk about it later.

CC Skylab, Houston. 1 minute till LOS. Carnarvon at 11:06, at 06, and we'll be doing a data recorder dump at Carnarvon.

SC Roger.

PAO This is Skylab Control at 10 hours 41 minutes Greenwich mean time. Ascension has loss of signal. And Skylab will come within range of the Carnarvon station in about 24 minutes. At 10 hours 41 minutes, this is Skylab Control.

END OF TAPE

SL-II MC-1158/1
Time: 06:04 CDT 25:11:04 GMT
6/18/73

PAO This is Skylab Control, 11 hours 4 minutes Greenwich mean time. Skylab coming up within range now of the Carnarvon, Australia, tracking station. We'll stand by.

CC Skylab, Houston. AOS Carnarvon, 10 minutes.

CDR They took the - the SPT's doing the television thing, he'll talk to you about that at the next station, if possible.

CC Roger.

SPT Houston, SPT.

CC Go, SPT.

SPT Okay, the - TV 28 is on tape and go ahead with your comments about the kind of tape (garble).

CC Okay, if you had a chance to pick up the procedure yet, Joe?

SPT To pick it up, yes, to look at it, no.

CC Okay, basically, it's two paragraphs, 1 and 2. We would like to have you perform paragraph 1 anytime within the next - this housekeeping period you're in right now. And then we'd like to monitor it for a while, and we'll give you a GO, and if it's required to do paragraph 2.

SPT Okay.

CC Okay. Right at the end of paragraph 1, it talks about monitoring the tank Delta-P for 15 minutes, that's not required of you, we'll go ahead and monitor here from the ground.

SPT Okay.

CC And also, right at the end - after the monitoring it talks about condensate tank water valve rill. We'll hold that for paragraph 2.

SPT Got it.

CC And while I'm talking to you about it, you'll notice if you read on ahead in paragraph 2 that it requires using the water servicing umbilical, so you might think ahead about using that if it's necessary. If we did paragraph 2, we'd try to pick it up at that housekeeping period right after your ATM pass.

SPT Roger.

END OF TAPE

D - 2176

SL-II MC-1159/1
Time: 06:12 CDT, 25:11:12 GMT
6/18/73

CC Skylab, Houston. We're about 30 seconds from LOS. See you over Guam at 11:20, 20.

SC Roger.

PAO This is Skylab Control at 11 hours 17 minutes Greenwich mean time. Carnarvon has had loss of signal. Skylab will be within range of the Guam station in about 2 minutes. We'll keep the line up for Guam acquisition.

CC Skylab, Houston. AOS, Guam, 10 minutes, 10 minutes.

SC Roger, Houston. This is the SPT. I've completed the first part of that procedure. That tank was empty, for all intents and purposes, and the bladder didn't move. And the Delta-P was 4.4 and it stayed there and you're in configuration.

CC Okay. Thank you, Joe.

PAO This is Skylab Control. Conrad and Weitz are involved in the lower body negative pressure and metabolic activity experiments at this time. Pete Conrad is the subject and Paul Weitz, the observer.

PAO Those experiments will be repeated later in the day with Weitz as the subject, I beg your pardon, with Kerwin as the subject and Conrad as the observer.

END OF TAPE

SL-II MC-1160/1
Time: 06:27 CDT 25:11:27 GMT
6/18/73

CC Skylab, Houston. One minute 'til LOS, Goldstone, at 45, 11:45.

PAO This is Skylab Control. Guam has loss of signal. Skylab will be within range of the Goldstone, California, station in about 15 minutes. At 11 hours 30 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-1161/1
Time: 06:43 CDT, 25:11:43 GMT
6/18/73

PAO This is Skylab Control at 11 hours 43 minutes Greenwich mean time. Skylab coming within range now of the Goldstone tracking station. We'll stand by.

CC Skylab, Houston. AOS, Goldstone, 17 minutes.

SC Roger.

CC SP1, for your information, we were sitting here enjoying your show and tell of the IMSS this morning, and the voice that we got through Goldstone is very good. However, looking at it through Texas it's kind of garbled and so according to our original plan, we're going to rewind and dump it again through Goldstone. So, we'll have it all with good voice quality.

SC Okay. Thank you.

END OF TAPE

SL-4X MC-1162/1
Time: 06:37 CDT 24:11:37 GMT
6/18/73

CC SPT, Houston. No need to acknowledge this, but on our little test on the condensate tank indicates that it looks pretty tight to us, and there's no apparent leakage, so we're going to go ahead and check out that QD, which calls for you to go into paragraph 2. And following your ATM pace, we'd like you to go ahead and proceed with that, down through probably, the part where you put the cap on the QD, because we do expect the QD itself to leak since it has previously. Just wanted to remind you, you do need to take the condensate water valve to FILL before proceeding into paragraph 2.

SPT Okay. I knew you would.

CC Skylab, Houston. We're 1 minute from LOS. We'll have you again at Carnarvon at 12:45, 45.

SPT Roger.

PAO This is Skylab Control at 12 hours 3 minutes Greenwich mean time. Bermuda has loss of signal. The next station to acquire Skylab will be Carnarvon in 42 minutes. During this pass over the United States, the television that Joe Kerwin taped earlier today of Dr. Kerwin showing and describing the medical facilities in the workshop was dumped. We'll come back up just prior to acquisition at Carnarvon. At 12 hours 3 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

PAO This is Skylab Control at 12 hours 43 minutes Greenwich mean time. The tracking station at Carnarvon is about to acquire Skylab. We'll stand by for that pass.

CC Skylab, Houston. AOS, Carnarvon, 7 minutes.

SC Okay, Crip. Let me give you a list of the pages on that EVA Checklist change, that I got.

CC Okay.

SC I'm doing it because I assume that's what you want, is that right?

CC Well, if it's okay with you, I think we might be just as well off, just going over those in total this afternoon at that suggested time when we've got Rusty in here. But, I can go ahead and take them again.

SC All right. I got a couple of other questions.

CC Go.

SC First, scheduled this afternoon for an M509 checkout. I'm assuming that that is 509 (garble) checkout session 13 of the 509 Checklist. Is that right?

CC We're verifying that right now.

SC Okay, and the film people are a little mixed up in our drawer A configuration. Just a minute.

SC Let me know when you're ready to copy about the film configurations, which I'm looking at the film thread pad for this morning, Crip.

CC Okay. Why don't you go ahead.

SC Okay. Film wise we got bumped up to you last night. And transporter 05, which is in A4, was loaded yesterday per the pad, with Charlie India 14. And you notice that today's pad calls for Charlie India 14 in A1 on transporter 02. Today's pad says leave transporter 5 empty, but I'm leaving transporter 2 empty. So all you got to do on today's film thread pad is to delete CharlieIndia14 for 02, and put it down on transporter 5 and that's the way the drawer is right now.

CC Okay. Believe we got all that.

SC Okay. Pretty easy to read today's film thread pad.

CC Okay. Regarding the M509 Checkout. The word I've got is you're supposed to be doing pages 13-2 through 13-9.

SC Wait a minute, wait a minute.

CC Okye-doke.

SC I assume that somebody thinks that came up, huh?

CC Well I would assume so. But I'd have to go back and check the paperwork.
SC Okay. (Garble) I'll write it down, but I haven't seen it yet, that's why I asked.
CC Okay. It probably wasn't very clear.
SC Okay. Go ahead with those page numbers.
CC It's 13-2 through 13-9. 15-7 and 16-1 through 16-4.
SC Okay. 13-2 through 9, 15 that's 1 5-7, and 16, 1 6-1 through -4.
CC Roger.
SC Okay.
SC Houston, SPT.
CC Go, SPT.
SC I must be doing this procedure wrong, Crip, on the condensate tank because I'm not getting a leak. I have the QD disconnected in panel 393, and it's been that way for 12 minutes and the pressure is still the same. If I, if I back it for 15 minutes, what do I do, just quit and reconfigure?
CC Stand by on that. Can you verify that you did open the water valve to FILL?
SC Yep.
CC We'd like to set on it for awhile, Joe, and take a look at it. First time we've disconnected and not had it go down.
SC I know. It's the first time you've had the SPT do it. That's pretty sulky.
CC No comment.
PAO This is Skylab Control at 12 hours 51 minutes Greenwich mean time. Skylab beyond the range of the Carnarvon station. Guam will acquire in about 8 minutes. The M509 experiment that was being discussed with the ground by Paul Weitz, is the Astronaut Maneuvering Equipment. Weitz will checkout that equipment at 14:30 Greenwich mean time, a 30 minute period in the Flight Plan for him to checkout the equipment. There's no - -

END OF TAPE

SL-II MC-1164/1
Time: 07:53 CDT 25:12:53
6/18/73

PAO There's no plan at present to actually utilize that experiment on this mission. We'll come back up just prior to acquisition at Guam. At 12 hours 52 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-1163/1
Time: 07:58 CDT, 25:12:58 GMT
6/18/73

PAO This is Skylab Control at 12 hours 58 minutes Greenwich mean time. We're standing by for acquisition at Guam.

CC Skylab, Houston. We're AOS over Guam for about 4 minutes. Sorry I lost you without a LOS call.

SC Okay.

CC SPT, Houston.

SPT Go ahead.

CC Roger, Joe. On that condensate holding tank. Like to understand once more, you said you did not cap it, is that correct?

SPT That is correct.

CC Okay. It looks good, and as you're observing, the DELTA-P is holding and - just another confusing data point for us. We don't understand it. It looks like it's working good now, though. At your convenience, you may go ahead and reconnect that at panel 393.

SPT I just turn the heater on, I suppose, huh?

CC That's affirm.

SPT Okay.

CC Skylab, Houston. We're about 30 seconds from LOS. We'll have you again at Goldstone at 13:22, 22. And we will be doing the data recorder dump over Goldstone.

SC Still there, Houston?

CC Affirmative.

SC When we get around to discussing the EVA checklist, one thing that I would like to discuss, then or to get an answer then, is do you still want to use the ah - other (garble) on powerdown the DCS pad, and all the lights in the workshop for the EVA prep?

CC We'll check it for you.

PAO This is Skylab Control, 13 hours 5 minutes Greenwich mean time. Guam has lost signal now. Goldstone will pick up Skylab in about 16 minutes. We'll be back up then. At 13 hours, 5 minutes this is Skylab Control.

END OF TAPE

SL-II MC-1166/1
Time: 08:19 CDT; 13:13:19 GMT
6/18/73

PAO This is Skylab Control at 13 hours 19 minutes Greenwich mean time. Skylab coming up within range of the tracking station at Goldstone, California now. We'll stand by.

CC Skylab, Houston. We're AOS Goldstone for about 15 minutes.

SC Roger.

END OF TAPE

SL-II MC-1167/1
Time: 08:28 CDT 25:13:28 GMT
6/18/73

CC Skylab, Houston. One minute til LOS. We'll have you again at Vanguard at 47, 13:47.
SC Think you do.
PAO This is Skylab Control at 13 hours 36 minutes Greenwich mean time. Skylab is out of contact with the Merritt Island, Florida station now. We'll go down over South America during this pass, and the next station to acquire will be the tracking ship Vanguard in about 10 minutes. At 13 hours 37 minutes, this is Skylab Control.

END OF TAPE

NO POWER DOWN FOR THE EVA

SL-II MC-1168/1
Time: 08:44 CDT 25:13:44 GMT
6/18/73

PAO This is Skylab Control at 13 hours 44 minutes Greenwich mean time. Skylab about to be acquired by the Vanguard Tracking Ship. We'll stand by.

CC CDR, the PLT had a question earlier. I can go ahead and clarify it now, we'll elaborate this afternoon during your pre-EVA stuff, but it is not our intent to go through any power-down kind of operations like we did for your last EVA.

PLT Roger.

CC Skylab, Houston. We're 1 minute til LOS. We'll have you again over Goldstone at 15:02, 15:02, nice long LOS.

SC Okay.

PAO This is Skylab Control at 13 hours 56 minutes Greenwich mean time. The Vanguard has loss of signal with Skylab. At a long LOS now. The next station to acquire Skylab will be Goldstone in 1 hour and 4 minutes. At 13 hours 57 minutes, this is Skylab Control.

END OF TAPE

SL-II MC-1169/1
Time: 09:59 CDT, 25:14:59 GMT
6/18/73

PAO This is Skylab Control at 14 hours 59 minutes Greenwich mean time. Skylab coming up on acquisition at Goldstone, now, after a long LOS. Out of contact for an hour and 4 minutes since leaving the Vanguard. Pete Conrad and Joe Kerwin will shortly begin runs on the M092 and the M171 experiments, the lower body negative pressure and the metabolic activity, with Kerwin as the subject and Conrad as the observer. The Pilot Paul Weitz is now in the midst of conducting ATM operations, Apollo Telescope Mount. We'll stand by for the pass through Goldstone, it will be a fairly short pass, not quite 5 minutes as Skylab slices through a portion of the acquisition range of Goldstone and does not contact any of the other United States tracking stations during this pass. We'll stand by.

CC Skylab, Houston. We're AOS, Goldstone for about 5 minutes.

CDR Roger, Houston. Housekeeping 7-Bravo complete. Yuck.

CC Roger. 7-Bravo complete.

CC Is the PLT available, please?

PLT Yes.

CC Could I ask you a couple of questions, like have you completed the 509, if so we're going to go ahead and dump the experiment recorders?

PLT Yes, I have, I just finished it.

CC Very good. Thank you, sir. Another note, in this session coming up on the ATM you should finish off the 82-Bravo film. So, go ahead and run it, finish it up, and everybody else running on the ATM today can disregard the 82B stuff.

PLT Okay. There's no harm in just letting it go sub zero, huh?

PLT No harm.

PLT Okay.

CC Also, today it's your housekeeping period following the ATM at 15:48. We'd like you to do the housekeeping 7-Delta there, that's the water reservoir checks.

PLT Okay.

CC Thank you.

PLT Say, Crip. What time's the EVA? What time are we supposed to have that hatch open tomorrow? Do you know?

CC Stand by 1.

CC 11:40 Zulu.

PLT 1 1 4 0 Z. Okay. Thank you.

PLT Say, Crip. We don't need an answer right now, but we've got to know for the EVA tomorrow, what canister

roll you want in prior to EVA? We've got a change there, that I suspect is left over from the last EVA, so they could get the S054 door. I want to know what do we want for canister roll? So, we can change our checklist accordingly.

CC Roger. We'll check that out for you, Paul.

PLT Okay. (garble) ATM, the checklist is down in the wardroom. I don't know what page it's on.

CC Okay. Paul, while I've got you here, we've got a no/close no/open zone, there should be a white flag indication for you on S056 for the door. I guess you had this problem last night and also, the malf for that is on page 11-16, is X-ray Kelly, S056 8 Bravo.

CC We'll have LOS in about 30 seconds. We'll see you again over Vanguard at 15:24, 2 4. And we'll be doing a data recorder dump at the same time.

PLT Okay, Crip. Doing 8 Bravo, like I did last night, leads you immediately to door 1, which I've done now.

PAO This is Skylab Control at 15 hours 6 minutes Greenwich mean time. Skylab has passed out of range of Goldstone antennaes. Next station to acquire will be Vanguard in 16 and 1/2 minutes. At 15 hours 7 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-1170/1
Time: 10:28 CDT, 25:15:22 GMT
6/18/73

PAO Skylab Control at 15 hours 22 minutes and 6 seconds Greenwich mean time. We are approaching acquisition of signal at Vanguard Tracking Ship. And we will stand by for live air-to-ground.

PAO We have acquisition of signal at Vanguard.

CC Skylab, Houston; AOS Vanguard 10 minutes. And we'll be doing a data recorder dump.

SC Roger, Bob. (Garble) (Music).

CC Sorry, Paul. I was unable to read you then.

SC (garble).

CC Copy.

SC Also, the results on that 56 door were just the same as last night, (garble)

SC I didn't have to catch my SCAN SPEC (garble), and I blew it anyway. Results on the X-ray Tele - yeah, X-ray Tele door were the same as last night. As soon as you stoke in that (garble), you know what it is. It's (garble) to the door sink. And immediately the door duct (garble) goes (garble), and you get a READY light.

CC Roger.

CC PLT, Houston. We are indicating that that door is still closed, which is in oposition to what your flag is going to be saying there. What you need to do is go ahead and try to command the door OPEN once more.

SC Should I do it while it's operating? I've got to operate now, and it's coming through the filters. You want me to do that now, or wait until it's finished with this sequence?

SC Oh, I see. So you say we got finished through that door - the whole door sequence.

CC Okay. We need you to go ahead and try to open the doors and start the sequence over, if you can.

SC You don't think they're open?

CC We don't think they're open - 56 is open, that is.

SC You want me to stop this sequence, then.

CC That's affirm.

SC Oh, ho. Why do you guys keep inadvertently disabling that door for us?

CC (Chuckle) More of 56's strange EMT problems, I suppose. We don't know the answer to that right now, Paul. We're looking at it and we are indicating the door's open, now.

SC Okay.

CC Paul, regarding those BET - doos talkback when you enable the motors like that, the talk back will give you a wrong indication, and you still need to go ahead and cycle the door to the position you want, to get a correct one.

SC That's what I just figured out, Crip.

SL-II MC-1170/2
Time: 10:22 CDT, 25:15:22 GMT
6/18/73

SC Now hear this, now hear this throughout the ship, the SPT has just started his last LBNP run.
MCC (garble)
CC Skylab, Houston; about 1 minute u til LOS. See you again at Hawaii at 16:33, 1, 6, 3, 3.
SC Roger.
PAO Skylab Control at 15 hours, 34 minutes, and 26 seconds Greenwich mean time. We have lost signal at the Vanguard Tracking Station, and will not reacquire for 57 minutes and 54 seconds when we will h ar from the crew of Skylab-II at the Hawaiian Tracking Station. This is Skylab Control at 34 minutes and 44 seconds after the hour.

END OF TAPE

PAO Skylab Control, we have air-to-ground from Hawaii, and we'll stay live for air-to-ground.

CC Skylab, Houston. AOS, Hawaii, 8 minutes.

PLT Roger.

PLT Houston, what's the earliest you can pick up this TV downlink?

CC Copy.

PLT Hello, Houston, Skylab.

CC Go. I'm still picking up - -

PLT What's the earliest they can - we can figure to get the TV downlink?

PLT Let me tell you why I asked. I'd kind of like to get that 4 limb core aline out of the way before sunset. I think I'm running a little ahead right now, and if you can get it early, I'll ship it to you early. If you can't I'll put it on tape. How's that?

CC Okay, we're checking on that right now, Paul.

PLT Okay.

CC PL, you can go ahead and put it on the WTR for us.

PLT Okay.

CC PLT, Houston. No need to acknowledge, but we have three teleprinter pads sitting in your teleprinter now, all concerned with the EVA and at your first opportunity you might want to pull them out.

PLT Okay.

CC And be advised, all of those items are of low priority. That did include the TV by the way.

PLT Okay.

CC Skylab, Houston. One minute til LOS. See you again at Vanguard at 17:02, that's 02. And we'll be doing a data recorder dump at Vanguard.

PLT (garble)

PAO Skylab Control at 16 hours 41 minutes and 9 seconds Greenwich mean time. We have lost signal now at the Hawaiian tracking station, and do not expect to acquire the spacecraft again until we reach Vanguard tracking ship in about 20 minutes and 15 seconds. During this morning, Skylab Commander Pete Conrad, and chief scientist Dr. Joseph Kerwin were subjects in a pair of medical experiments. One called M092 is to measure the transfer of body fluid from the legs and lower extremities to the upper body in the absence of gravity. The other, medical experiment M171, measures each crew member's metabolism as he works peddling a bicycle. Measurements are done with a series of medical instruments attached to the bicycle, and the associated hardware. This afternoon beginning about 12:30 p.m. central daylight time,

SL-II MC-1173/2
Time: 11:31 CDT 23:16:31 GMT
7/18/73

A little less than an hour from now, the crew will begin advanced preparations for tomorrow's extravehicular activity. The EVA, with hatch-opening expected about 6:40 a.m. central daylight time, Tuesday, will take about 2-1/2 hours. This spacewalk will be the third during the first manned Skylab mission, the only such activity that was scheduled before the launch of America's first space station. The EVA tomorrow is primarily planned to retrieve film from several instruments on the solar telescope mount. This includes instruments to study the Sun, S052, 54, 56, 82A and H-Alpha 1, all a series of solar experiments. Film will be recovered from those by Pete Conrad, handed to Paul Weitz, and then returned and they will be replaced by individual film cassettes. In addition to that, there will be some minor repair work done by the crew. Some material that has accumulated on one of the experiments will have to be removed; it's interfering with an occulting disc on one of the solar telescope experiments. It's a device that's used to block out the Sun on a coronagraph experiment. And in addition to that, they may deploy a small piece of material from the solar sail, a separate piece of material to see what will happen under conditions in the Sunlight. Those are a couple of the things that are being considered now. An additional thing is a possibility that there may be some tapping done on CBRM number 15, that's a charger battery regulator module number 15. That CBRM is not operating. They feel that tapping on it with a hammer may get it back into operation. One of the objects of this afternoon's pre-EVA preparation is to get together the equipment necessary to make those corrections, including a small brush to brush off the piece of material on the occulting disk, and a hammer for pounding on that CBRM. Those are the main activites. This is a scheduled EVA, it was scheduled before the mission. There will be a number of EVAs done on future Skylab missions. These are planned EVAs, as distinct from those EVAs that had to be done to make repairs to the spacecraft. EVA scheduled for tomorrow morning beginning at 6:40 a.m., several hours after the crew awakens on their new sleep schedule. This is Skylab Control at 44 minutes and 35 seconds after the hour.

END OF TAPE

PAO It's Greenwich mean time. We're 1 minute and 44 seconds from acquisition of signal at the Vanguard tracking ship. Like to make a correction on that previous statement on total number of spacewalks during this mission. There have been 3 extravehicular activities. Only two of those can correctly be termed spacewalks. The first was a standup extravehicular acitivity in the command module. Did not involve the crew m ember leaving the command module and for that reason cannot correctly be termed a spacewalk. So there have been three EVAs. The last two of those will be spacewalks, the last one being a spacewalk and the one to come tomorrow is also considered a spacewalk. We will stay live for air-to-ground from Vanguard tracking ship in approximately 1 minute.

CC Skylab, Houston. AOS over Vanguard for 10 minutes. Then we'll be doing a data recorder dump.

SC Okay.

SC Hey, Crip. On this message 2515Delta, odds and ends, itis talking about examining the CO detector samples. And I went and looked at those. And we are getting a little bit of discoloring in them, but there's nothing that would indicate more than 25 parts per million CO to start with. And most of them are better than that. And that is only at the extreme edge - each edge of the little yellow color block.

CC Okay. We copy that, Pete.

SC You'd think they'd been pretty much that way. They were that way at the beginning of the mission - some of them.

SC Yeah, I don't think they've changed since the beginning of the mission. And I noticed that and made a comment about that, I think, whenever I had to do CO sampling, which was up there like day 16 or - you know, somewhere in there.

CC Roger.

SC And I have duely located CBRM15 from the (garble) station and so marked the spot in my mind where to pound with the hammer.

CC Sorry, Pete, I missed most of your comment that time.

SC I said I have duely located CBRM number 15 from the (garble) work station and have placed in my mind the proper location to pound upon it with the hammer.

CC Yes. That's a (garble) procedure.

SC Right.

CC Skylab, Houston. We need the DAS for a couple of minutes to do a little tweak on a couple of rate gyros.

SC Okay. Go ahead.

L-II MC-1172/2
Time: 11:59 CDT, 25:16:59 GMT
6/18/73

CC Skylab, Houston. The DAS is yours once more, and the Flight Plan is in the teleprinter.
SC Roger, Crip.
CC Skylab, Houston. We're 1 minute from LOS. See you again at Hawaii at 18:09, 1 8 0 9. And Rusty will be available to talk EVA with you at that point.
PAO Skylab Control at 17 hours 11 minutes and 44 seconds Greenwich mean time. We have lost signal at the Vanguard tracking station and will acquire again in 56 minutes and 44 seconds at Hawaii. At that time Astronaut Rusty Schweickart, a member of the backup crew, will be available to talk to the crew about the EVA, and you'll hear that on live air-to-ground in about 56 and 1/2 minutes. This is Skylab Control at 12 minutes and 5 seconds after the hour.

END OF TAPE

EVA PREP TALK

SL-II MC-1173/1
Time: 13:06 CDT, 25:18:06 GMT
6/18/73

PAO Skylab Control at 18 hours, 6 minutes, and 37 seconds Greenwich mean time. This time we're approaching the Hawaiian Tracking Station about 1 minute and 50 seconds to acquisition of signal at Hawaii, according to our clock. And we will remain live for air-to-ground from Hawaii. At this time we expect to hear from Rusty Schweickart, here on the ground, speaking with the astronauts about the planned Extra Vehicular Activity for tomorrow morning. This is Skylab Control remaining live for air-to-ground; Hawaii.

PAO Skylab Control. We have acquisition signal at Hawaii.

CC Skylab, Houston; over Hawaii for about 9 minutes.

SC Hi, Rusty.

CC Hey there, troop, got some word for you.

SC What is it?

CC Okay. Let me talk first, I guess, to CDR with regard to the location of the expected piece of contamination on the S052 disc.

CDR Okay. Go ahead.

CC All right. CDR, when you look in the end - in the mouth of the instrument out there, on the Sun end, the pylon should show up very - as a very obvious thing. The front surface of it is painted white, as is the front surface of the D1 disc. And in looking in the mouth, if you go 120 degrees clockwise from the pylon, you should see the expected piece of contamination, which is - should be about millimeter size on the edge of the disc. From your location in the foot restraint, CDR, the door is going to be slightly to your right, when we go to this roll position, which will allow the sunlight to go down inside the instrument and reflect for you. The Pylon should be at about your 1 o'clock position looking into the end, which then going 120 from that would put the contamination at about 5 o'clock.

CDR Okay. Got it.

CDR Go ahead.

CC By the way, the star tracker is not locked on at the present time. If there's somebody there to do it, go ahead. If there's nobody there, we'll just inhibit the Nz updater - updata from the ground here.

CDR Joe's on his way.

CC Okay, CDR. One other thing. When you're working on the S052 disc, there, you want to be aware that there is a heat rejection mirror down inside there so that with the Sun coming into the end of the instrument, there will be a ray, a rather a relatively bright ray of sunlight coming back out. It's not enough to worry about as far as damaging anything or making you too hot, but just be aware that

there will be a solar reflection coming back out of the instrument.

CDR Yeah. But it's not ah - It's not the (garble) of the D1 disc, right?

CC Negative. It's way down inside the instrument and rejects the solar heat back out the tube.

CDR Okay. Understand you. The way I looked at that pad, the D-1 disc was the first thing you came to.

CC Okay. The only other caution on it is we want to make sure that you brush from the center of the disc toward the outside and not to drag the hairs across the edge of the disc, because it is very sharp, and will probably leave hairs floating around if we do that.

CDR Okay. Understand.

CC Okay. For the SPT. If you've got an EVA checklist out, page 2.1-11, this is this operation on opening the S2 door.

SPT Stand by, Rusty. I'm getting you a star.

CC Okay. Fine. Let me go ahead then, and mention something on the ah - on the TV and the sail material - Have you had a chance to look at these last couple of messages as they come up on the teleprinter?

CDR Yep.

CC Okay. We want you to know that they're both low priority, in fact, - can you give us the status, have you done anything yet with the TV?

CDR Nope, we haven't. We were going to go ahead and rig it.

CC Okay. Our feeling on that down here is that if you haven't all ready started, we'd just as soon you'd forget it entirely, unless you particularly want to take it out.

CDR Nope. I don't want to take it out. We'll let Joe have it up at the MDA.

CC Okay. Fine. That'll be fine. And we appreciate the pictures out the STS window, if he can give them to us. All right. On the sail material, we also want to let you know that that is relatively low priority, also. If you are going to do that, we'd like to have you do that, Pete, when you come back from the transfer work station before doing the DO24, rather than after. And you'll just have to watch out so you don't put your feet on that when you're retrieving the DO24.

CDR Understand.

SPT And, Rusty. I'm ready to talk.

CC Okay. On 2.1-11 ah - -

END OF TAPE

SL-II MC-1174/1
Time: 13:14 CDT, 25:18:14 GMT
6/18/73

CC Retrieving the D024.
SC (garble)
SC And Rusty, I'm ready to talk.
CC Okay. On 2.1-11 we have this information on opening the S052 door. And I want to make sure you understand why the day and night thing, or if you have any questions regarding that.
SC I'm sure it's to prevent you from damaging the instrument. We're in such a high beta angle that it's going to be a little confusing as to what's day and what's not, and I guess we ought to use the computer talkback. Right?
CC That's negative. The computer talkba - The reason is not to protect the instrument so much, Joe, it's that if the Sun is up and we have the canister locked in solar inertial, we think that when you open the door, it'll close again right away because we will probably not be within 5 arc minutes of Sun center. And that's why the restriction. So if the Sun is physically above the horizon, above the visible horizon, you'll want to use the daylight procedure, which puts you in experiment pointing. And you go Sun centered so that the door will not close on you. If you're at night, however, if the Sun is below the horizon, you can just go ahead and open the door, following that nighttime procedure.
SC Okay. Which reminds me of something. At the very beginning of this checklist, we were powering down the EPC loop, the rate gyros and so forth. Is that a change that we're now to ignore, or what?
CC That's affirmative. You are to ignore all pen and ink changes that we had back there at the - for the previous EVA. Those all apply to low power and things like that. All those pen and inks are to be disregarded. With regard to that, there was a question asked this morning as to the roll angle on the cannister. And we go to the original roll during the prep, which is plus 4392, which is on page 1.2-2.
CC Okay, one change that we have added on that same page during the prep is to have the roll gain at times 1 rather than the preflight planned times 2. The reason for that is that we have had Z GYRO problems with high roll rates on the canister. And so in order to preclude losing the Z GYROs, we want to make sure that we have the roll gain in times 1. And CDR, when you're rolling the canister out there, we would appreciate a relatively positive roll from one camera position to the other. That is, don't start and stop rapidly going in and out of a high roll rate.

SC Okay. All right, Rusty, on the same page where we power down the EPC loop, there are two other pen and ink changes. One of them is to enable TACS; the other one is to enable CMG AUTO RESET. They're all in the same ink and everything else. Now which of those do we pay attention to?

CC Stand by just 1.

SC Got you, didn't we?

SC I think we enabled TACS and I think we enabled CMG AUTO RESET. But it's pretty hard to tell.

CC Yes, sir. We do not power down the EPC rate gyros and that block of pen and inks up there. We do enable the TACs and the CMG AUTO RESET.

SC Okay.

CC Okay. Just a short word on the malfunction procedure with the feed C port purge valve there. We found from testing down here in the last couple of weeks that there's a potential that the feed port purge valve may push in the flapper valve just slightly if there's a low tolerance in the helmet. If that's what's causing a leak, what we're saying is, press on. It's no sweat. Or you can try and reseat the feed port purge valve. By the way we're going - -

SC We've already passed that check once for these purge valves. We never took them out of our helmets because we knew we were going to go EVA.

CC Okay.

SC So they're still in there, and I think they're all right.

CC Two of the three of you have passed the check, Pete. We're just playing cautious for the third guy. We're going over the hill here. We'll pick up the Vanguard at 18:40.

PAO Skylab Control at 18 hours 19 minutes and 3 seconds Greenwich mean time. We have lost signal at the Hawaiian tracking station, and we'll pick up the crew again at Vanguard in 21 minutes and 5 seconds. This is Skylab Control at 18 hours 19 minutes and 17 seconds.

END OF TAPE

I KNOW YOU"RE ALL AGAINST ME

SL-II MC-1173/1
Time: 13:38 CDT, 23:18:38 GMT
6/18/73

PAO Skylab Control at 18 hours, 38 minutes and 25 seconds Greenwich mean time. We are 1 minute and 49 seconds from acquisition of signal at Vanguard. But we are coming up early in the event that there is an early acquisition. We expect to hear some additional disscussion about the preparation for tomorrow's Extra Vehicular Activity. Crewmembers involved in that, directly, are Commander Conrad - Commander Conrad and Pilot Paul Weitz. Dr. Kerwin will remain inside during the EVA and we will remain live for air-to-ground from Vanguard Tracking Ship.

CC Skylab, Houston; over Vanguard for about 10 minutes.

SC Roger.

CC For your information, we're having a data recorder dump at this time over Vanguard.

SC Okay.

CC And the only other information I've got to go from the ground up in that direction is that the summary Flight Plan for tomorrow does not have listed in it any post-EVA time after the eat-period for the SPT. And that was an oversight. And we'd just like to make sure that the SPT takes whatever time's available for the post EVA stuff before pressing on with the housekeeping we do have listed.

SPT We knew you were all against me.

CC That's very perceptive.

CC And, the one other thing we want to clarify is that we do intend to bring back three S082 magazines, two A's and 1B.

CDR You betcha, baby.

CDR The original ones are all ready stowed, Rusty, in the command module.

CC Okay. Thanks.

CC And were there any other things we could clarify for you concerning the preps or the operation tomorrow?

CDR I don't think so. Leaving the television down is fine. I understand the sail business. I intend to stow it tonight. And we'll install it before D024. And I think that's about it. We've been over the check - completed the first page on our checklist in time for EVA prep except for ah - 2 of the helmets, you know, the (garble). And I'm just getting ready to some ATM film.

CC Okay. Fine. Did our ah - did our concern on that (garble) port leakage get through there before we went LOS, Hawaii?

CDR Yes it did. I checked Paul's and it, at least my eye ball looks very good.

CC Okay.

CDR We understand it, and will act accordingly.

CC Skylab, Houston. We have sort of a question here. I wonder if there's a possibility that after the TV tour you may have left a hot mike connected there with a light-weight headset on it. We have noticed an apparent shift in the quality of the Channel-B voice and we also noticed considerable background in the last couple of conversations you've had.

CDR Okay. We'll check the boxes that we have, - that we have comm cables connected to and verify it for you Rusty, in just a minute.

CC Okay.

CDR Rusty, we didn't find any in 1COM/PTT. The one's that (garble) which shouldn't make any difference.

CC Okay. Fine. It may be just that your friends up there were rather noisy on your last conversation.

CDR Which ah - Are you referring to the SPT's day in the IMSS?

CC No, the quality on that one was good. But we did have one recorder dump from Channel-B that sounded different as far as the quality was concerned. I think it may just have been something unusual at that time, so I wouldn't go on a witch hunt for it.

CDR Okay.

PLT Hey, Rusty. I've got a couple of words on 509, if you want to pass them on to (garble).

CC Sure. Go ahead.

PLT The checkout went fine, everything nominal. I don't really have anything to report. I would recommend to Hal and those guys, that when those thrusters fired it's quite loud in the workshop - I recommend that anybody down here wear ear protection of some sort. And that they have all those objects tied down, because you get a pretty good blast with those thrusters, even though they're very small.

CC Okay. We got it.

CDR He did a pretty fair flying job, seeing it was done on the end of a 2-1/2 foot table.

CC Rog. We didn't hear that. And we have about 30 seconds before LOS here. We'll be picking you up at Ascension at about 56.

CDR Okay.

PAO Skylab Control at 18 hours, 48 minutes, 40 seconds Greenwich mean time. We have lost signal now at Vanguard and expec to acquire again in about 7-1/2 minutes at the Ascension Tracking Station, a very low elevation pass lasting about 4-1/2 minutes. During the past 2 passes there have been some discussion of the EVA procedures for tomorrow. They're presently working on prepreparations, studying check-lists and making plans for tomorrow's activity. Commander

SL-II MC-[illegible]/3
Time: [illegible] CDT, 25:18:38 GMT
6/18/73

Pete Conrad will play the role of EV-2 tomorrow. EV-2 has the duty of making minor repairs to one of the ATM batteries, that's CSRM number 15; charger battery regulator module number 15. That battery has been inactive since before the Skylab crew first arrived at the space station. Conrad will also retrieve and replace film for several of the instruments used to photograph the Sun. And he will be responsible for brushing a tiny piece of matter from the occulting disc of the white-light coronagraph that -

END OF TAPE

PAO - used to photograph the sun. And he will be responsible for brushing a tiny piece of matter from the occulting disk of the white light coronograph. This is an experiment which has a small disk that's placed in front of a photographic equipment, the coronographic equipment, and that disk has a piece of matter on it. The disk is used to block out the main body of the sun. The contaminant is about 1/25th of an inch in diameter and it will be brushed off with a small brush. Assisting Conrad will be Pilot Paul Weitz as EV1. The Pilot's job is to take the film as it's handed down by Conrad and to give him replacement cassettes. Dr. Kerwin will work inside the spacecraft and is expected to operate the television camera as EV3. That TV camera is now planned to be operated inside the craft from one of the windows of the structural transition section of the multiple docking adapter, near the Multiple Docking Adapter. This is different from the original Flight Plan, which called for a change assignment of roles. In the original Flight Plan Kerwin was named as EV2, this is precission, with Paul Weitz remaining inside and Conrad the supporting astronaut. But at the option of Skylab Commander Conrad, Weitz, an astronaut on his first space mission, will be given an opportunity to participate as his assistant. Weitz and Conrad did train as EV1 and EV2, so that they could replace the Conrad/Kerwin team in case Kerwin should have been unable to participate in an EVA. Since Kerwin has already participated in the solar array repair, done during an earlier Extra Vehicular Activity, Conrad decided that Paul Weitz should be given a similar role tomorrow. So the team, instead of the original team planned before the mission of Conrad supporting Kerwin, we will now have Weitz supporting Conrad. This is a second or backup team, but it is being done just to give Paul Weitz experience and at the request of Commander Conrad. This is Skylab Control. We have 4 minutes and 32 seconds to acquisition of signal at Ascension and we will return at that time. It's now 51 minutes and 55 seconds after the hour.

END OF TAPE

PAO Skylab Control at 18 hours 54 minutes and 30 seconds Greenwich mean time. We're now about a minute and 45 seconds from acquisition of signal at Ascension tracking station. A low elevation pass lasting 4 minutes and about 40 seconds. We will remain live for air-to-ground from Ascension.

CC And, Skylab; Houston here over the Ascension for about 4-1/2 minutes.

SC Roger.

CC And Skylab, Houston. We're about 30 seconds from LOS here at Ascension. We're going to be catching you at the Vanguard next next, gateway to the South Atlantic Anomaly, at 20:17.

SC Roger. All aboard.

PAO Skylab Control at 19 hours 1 minute and 55 seconds Greenwich mean time. We have lost signal at the Ascension tracking station and do not expect to acquire again until Vanguard, 1 hour and 15-1/2 minutes from now. This is a long pass with no stations on it; it skirts the area between Guam and Hawaiian tracking stations, and we have no signal at that point. So for an hour and 15 minutes there will be no acquisition of signal. We are expecting a change-of-shift briefing with off-going Flight Director Milton Windler at approximately 2:30. Also with Flight Director Windler will be Robert Parker, the Skylab Program scientist and a representative from the Extra Vehicular Activity Preparations area. This is Skylab Control. We will give you an announcement of Windler's leaving the console. He is now at flight management team briefing, which takes place after each change of shift. And when he returns to Mission Control and departs, we will give you an announcement of that, approximately 30 minutes from now. This is Skylab Control at 2 minutes 56 seconds after the hour.

END OF TAPE

SL-II MC-1178/1
Time: 14:17CDT, 25:19:17 GMT
6/18/73

PAO Skylab Control at 19 hours, 17 minutes, and 9 seconds Greenwich mean time. This time we're just a little over 1 hour from acquisition of signal at the Vanguard Tracking Ship. We do have an announcement; beginning at 2:30 p.m. central daylight time, the final edited version of all television returns so far, from the Skylab Mission, will be replayed. The replay of Skylab's television sequences will run approximately an hour and a half, from 2:30 p.m. to 4:00 p.m. central daylight time. This is a replay of step 3, the final edited version of Skylab's television sequences. All of the television sequences to be replayed from 2:30 to 4:00 p.m. central daylight time today. At approximately 2:30, we expect Flight Director Milton Windler to be available for a change-of-shift briefing. He is now in a flight management team meeting, and we do not have an exact time for the end of that meeting. But as soon as that meeting is concluded, we expect him to leave for a briefing. We're still estimating approximately 2:30 for that briefing. Included in the briefing will be Skylab Program Scientist, Astronaut Robert Parker, and a member of the EVA team. This is Skylab Control at 18 minutes and 26 seconds after the hour.

END OF TAPE

SL-II MC-1179/1
Time: 14:31 CDT, 25:19:31 GMT
6/18/73

FAO Skylab Control at 19 hours, 31 minutes, and 6 seconds Greenwich mean time. We have still not seen Milton Windler return to Mission Control Operations Room. And for that reason, we cannot tell you exactly when the press conference will begin. We do expect it will be delayed. He is apparently still in the flight management team meeting. And as soon as he leaves Mission Control, if we are informed, we will let you know immediately. There will be a slight delay in the replay of the entire television video recorded so far during the Skylab Mission. We expect that delay to be just a matter of a few minutes. That will be a 1 hour and a half replay and beginning probably about 2:35, or shortly thereafter. And that will include all the television sequences as they have been edited from Skylab. This is Skylab Control. We're still 45 minutes and 42 seconds from acquisition of signal at Vanguard Tracking Ship, and we will probably not be up until Milton Windler leaves the Flight Contro - leaves the Mission Control Room. Skylab Control at 32 minutes and 8 seconds after the hour.

END OF TAPE

SL-II MC-[illegible]/1
Time: 14:41 CDT, 25:19:41 G.T
6/18/73

PAO Skylab Control at 19 hours 41 minutes Greenwich mean time. At the present time we are passing north of Guam on the descending mode of the 507th revolution of the Earth. We are about to begin a press conference with Milton Windler in building 1 auditorium. Flight Director Windler has left mission control center and is on his way now to go to building 1. He's taking with him someone from the EVA branch and also we expect Dr. Robert Parker, astronaut and Skylab Program Scientist to be available at that briefing. The briefing should begin in about 3 to 5 minutes at building 1 briefing room with Flight Director, off-going Flight Director Milton Windler. The Flight Director now is Charles Lewis and the spacecraft communicator now on duty, Dick Truly. This is Skylab Control at 41 minutes and 52 seconds after the hour.

END OF TAPE

RUSTY TALKS ON EVA

PAO: Skylab Control at 20 hours, 42 minutes, 42 seconds Greenwich mean time. We have just lost signal at Ascension. During the last two passes over Vanguard and Ascension tracking, we were recording the air-to-ground because of the briefing that was in progress here at Johnson Space Center. We will replay that air-to-ground now. There is a discussion that includes Rusty Schweickart at the Vanguard station and at part of Ascension, as well as Spacecraft Communicator, Dick Truly. Here is the record of the air-to-ground.

CC Skylab, Houston; AOS Vanguard for 10 minutes.

PLT Hi there, Richard. We were beginning to think you had a day or two off.

CC No, sir. Back at work again. How're y'all doing today?

PLT Feeling better, but we're having trouble making sure which changes we're supposed to follow on the EVA checklist, believe it or not. I got a question. On page 3.1-8, if someone there will turn to that page.

CC Okay, hang on just 1 second.

CC Okay. We're looking at 3.1-8. Go ahead.

PLT Okay, in the lower right hand corner, Dick, it says ATM reconfiguration. Right after the (garble) of EVA there's a change which changed section 5 to page Charlie 12. What am I - what is supposed to be used tomorrow?

CC Okay, stand by just 1 second.

PLT Okay.

CC Okay, Paul. Let me see if I can answer this question for you. And if you don't understand it, let's keep talking about until both you and I do. You're to disregard an old message, the number of which was 1317 Alfa, which was sent up for the previous EVA. There is one change in section 5 that is reflected on a message you have - that you got today, I think, the number of which is 2429 Alfa. And it's entitled EVA ATM. Over.

PLT All right. Thank you.

CC Okay. The message - EVA ATM message that we sent up today makes one change under section 5.9 of the ATM Experiment Checklist and data book.

PLT Okay. Well, I'll have to go up there and look.

PLT It's not as simple as just telling me whether to use page Charlie 12 or section 5. (garble) just a minute.

CC Okay. Paul, I'll tell you what. Rusty was not plugged in when you first called up, and did not hear

the original question. If you'd like to restate it and still don't understand what I told you, go ahead and maybe he can help more.

PLT Okay. That might do it.

CC Roger.

CDR Hey, Rusty. On - if he's here listening - I was looking out the window now, and I can just see the very top of a CBRM - either 3 or 15. I can't tell which one it is, but I can see down there pretty good. I can't (garble) these things and so forth in the VC. If they tried that, how did they get out there?

SCHWEICKART CDR, yes, I am here, and we were not very specific about that intentionally. It looks as though the two ATM trusses that go down that way - the one closest to the center work station were the four of the relatively good handholds, but we were not too specific about the best way to get there. We thought we'd leave it to your judgement. But if you rotate around your seat about a 90 degree roll, it's right in front of your nose.

CDR Oh, yeah, I haven't had any trouble locating it. I know where it is, but I - I presume it also says on the package CBRM 15.

SCHWEICKART I don't believe so, CDR. I think the surface is entirely white.

CDR Okay. Well, I - never mind. I know which one it is.

SPT Rusty, for me, would you review the - what the function is of the stuck relay, and what I might expect to see as he hammers it?

SCHWEICKART Yes, sir. We hope to see - hope that you'll see, Joe, after Pete hammers it, is that the charging current will come up. That is, that you will begin to see the solar arrays charge the battery.

SPT Okay.

SCHWEICKART And two possibilities there - that would be - -

END OF TAPE

FOIA Request - Case Files

CC Recharge the battery.
SPT Okay.
CC And two possibilities there that would relate to a hammering on the CSRM, certain testing that was done preflight indicated that there has been a history of the contactors sticking and hammering on it in two cases out of something like a thousand did free up the contactor and it began working properly.
SPT Was it clear who suggested this approach?
CC I don't believe so, but the way things operate, I probably ought to check.
PLT Okay, rod C in the EVA checklist, page 3.1-8.
CC Okay, we're there.
PLT ATM reconfiguration for stowage.
CC Go ahead.
PLT What should the next sentence read?
CC Okay, stand by.
CDR Okay, while you're standing by, let me answer. The second question of the evening questions tonight was radial docking port clear and usable. The radial port of clocking (garble) in position. I've answered that 15 times now. The answer is yes, again.
CC Okay, thank you. I'll make sure we've finally got it.
CDR Got what?
CC That it's clear.
CC Okay, the sentence after ATM reconfiguration for stowage should be back to the original; that is, it should say, "See ATM experiment checklist and data book, Section 5," and we do have just a couple of changes that were called up for that experiment checklist and data book.
PLT Okay, Joe made some changes to that today, on page 5-9.
CC That's correct.
PLT So, what is now on page Charlie 12, I can tear out of the book and throw away. Is that right?
CC Stand by. We'll check that one.
PLT Okay, the reason I left it in rod C, and it says, "Post EVA panel reconfiguration for unattended OFF." Now that was before our last EVA, and I don't know what you intend otherwise. I just wanted to know whether I could throw it away or not.
CC Okay. The intent of that the last time related to the low power problems that we were having

and we are now back to essentially normal, with the exception of things like the S054 power and things of that kind.

PLT Okay.

CC Okay. We're going to recheck that, but in looking at it, from what we can see, and get an answer right now, all that stuff on Charlie 12 was related to the low power situation and if it's any different from that, we'll let you know tomorrow.

PLT Okay.

CC There is one other thing that I thought I'd mention to you tonight, just to make sure you're aware of our concern, and that is that you will be having three people on one SUS loop, and that that SUS loop will be running in by pass rather than in EVA. We want you to understand that you will not have the same cooling that you had last time. The inlet temperatures to the LCG will run slightly higher, and so we would like to enssure that you do not get behind the power curve by storing very much heat and then going to, say a diverted position of 5 and expecting everybody to remain cool. In other words, we'd like you to try and stay ahead of the heat buildup and if possible we'd like you to avoid using position 5 unless it is necessary.

CDR Now that's radically different (garble) We probably won't get it over heated. I never got hot a bit the last time.

CC All right, but you realize you were running an EVA position before, and this will be slightly different. The loop will not be quite as cool.

SPT Rusty, this is Joe. I rigged the LSUs this afternoon per the cue card, and I put EV 1 and EV 2 on SUS 2. Is that wrong?

CC (Garble) We're going to have to get you an answer at Ascension. We're only 15 seconds from LOS here. But all three will be run on the same SUS loop. We'll get right back to you.

SPT Okay.

CC And guys, we're going to see you at Ascension at 20:30, and we will be dumping the data recorder there.

CC Skylab, Houston. We're AOS at Ascension for the next 10 minutes, and please stand by. We're straightening out the question on the SUS loops. We'll be right back to you (garble)

SPT We found the message, Dick.

CC Okay, so you will have all three connected to -

END OF TAPE

PLT - we found the message, Dick.
CC Roger. Okay, so you will have all three connected to SUS 1, then?
PLT Right.
PLT (Garble) point is well taken. We changed a lot of other things, though, on those EVA cue cards, but didn't change that.
CDR If those guys on the next crew don't do anything, they better work something out with the guys on the ground about these changes, because we have no way of keeping them straight.
CC Yeah, we've got very much the same problem here. I don't think we're in much better shape than you guys are. The only thing is we have more input. I think in regard to that - if doing the prep tomorrow morning, there's any question at all about what we've meant, please feel free to ask.
CDR Oh, was trying to pin down the hammer one day. I can't find it. I'm not sure it didn't get slipped in the checklist someplace. I got the one about the location of the CBRM, but I don't know what happened to the one with the hammer. It went in to the checklist, I guess. You know what message that was on?
CDR Which group it was in?
CC Was this the one talking about prep of the hammer, Pete?
CDR Right.
CC Okay, we'll look and into that.
CDR Hey, meanwhile - CDR ate everything. He had no optional salt. He's going to have two butter cookies. The PLT ate everything today but his bread. He added plus 1 H_2O and 1.5 optional salts, and plus 1 H_2O for the CDR, also.
CC Okay.
CDR And the SPT ate everything today.
CC Roger.
CDR And let me give you the film.
CC Okay, we're listening.
CDR Okay, on the film, day 169. 16 millimeter: S092/171 M151, SPT Charlie India 1438, Charlie India 11. M151-1, Charlie India 14 00, CI Charlie India 11: 35 millimeter: Charlie India 30 exposed, Charlie India - by the way, we got seventy some pictures on that, Charlie India 3208, Charlie India 3128, CX06 on the 70 millimeter is still on 103. No EREP. A-1: X-porter 02, no supplies, no percentage, Charlie India 12; A-2 is 03, Charlie India 06 18 Charlie India 03 83 06, Charlie India 13 48, Charlie India 10 84 05, Charlie India

SL-II-MC-[illegible]
Time: [illegible] CDT, 23:20:32 GMT
6/18/73

14, [illegible] Charlie India 11; [illegible]ating 07 Charlie India 09 66, Mike [illegible] 03. That's it.

CC Okay, thank you, Pete. We got it.

SCHWEICKART And, CDR. That message on prepping the hammer was on the same message with the one that talked about bringing the SUS - the SUS 1 loop on in about four steps there. And I can talk to you about it if there's a question. It should be in your prep checklist on page 1.2-5.

CDR Okay. Well, that's where it is, then.

CDR All right. Roger.

CDR Okay, Rusty. I remember it was a 2-1/2 inch loop, and it was supposed to go on the VC tree, right?

CC It was a 2-1/2 inch loop, and the reason - no - it - it will hook into the temporary stowage hook in the SAS. And the 2-1/2 - the reason for the 2-1/2 inch loop is in order to interface properly with the boom - the jaws of the boom hook.

CDR Oh, yes.

PLT Okay.

CC And with the - with the brush we have a smaller loop, and we're taping that to the VS tree. And then you can use the small elastic wrist tether hook when you're down at the Sun end, to hold onto that one when you're reaching down in there.

CDR Right. We got - we got that covered. Okay.

CC And when you get out there - on that CBRM - how about giving it a hit for us, too, will you?

CDR Okay. I had a little practice on the Moon, and I'll see what I can do up here. They're guarenteed if you break it? Right?

CC We've been - we asked very carefully about that and we were given tremendous assurance. In fact, they hit an operating CBRM as hard as they could, about 30 to 35 times over in Huntsville, and - -

END OF TAPE

[illegible] tremendous assurance, in fact they hit an operating CSM as hard as they could, about 30 to 35 times over in Huntsville, and it kept right on operating.

CDR Okay.

CC Guys, we've got about 4 minutes left in this Ascension pass, and I've got a couple of more general notes for you. One is, tomorrow morning, we're going to be operating ATM unattended operations for about 1 hour after you wake up, and since there's no other ATM operation scheduled tomorrow, we have no other reason to send up a SAP pad or a schedule pad, and we don't intend on doing that this evening, and I'm assuming that you guys are going to be busy preping for the EVA anyway, so that won't make any difference. Okay, the other note I have here is an answer to Pete's question last night about the trim burn. First of all, the purpose - the functional purpose of that trim burn was to set up a ground track drift rate such that when Al Bean and his friendly comrades get up there on SL-3, their first trim maneuver will put us back on a premission nominal ground track. And the reason - there are several reasons for the thing being so small. One is, we've had less drag than we predicted, we've vented less than we had predicted. We've shortened the time between SL 2 and 3, and also we were on the west - we already were on the proper side of the ground track in drifting towards it, so that the trim burn went off just like we planned it and it accomplished our purposes.

CDR Good.

CC Roger.

SPT How much time we got?

CC Still got 2-1/2 minutes. Go ahead.

SPT Are you ready for the status on our wardroom window here?

CC Yes Sir.

SPT Okay. Since it wasn't working anyway, we decided last night we might as well turn it off. So we turned it off. We got up this morning and the whole gear pane was covered with frost - fog. Covered with condensation on the inside. So I turned it back on, and it went away. So the heater is working. Now I don't know whether they're dual elements one of them's working, or both panes are heated, and only the inner one's heater is working anymore, but it obviously heats the inner pane yet, Dick, because it drove that condensation off and keeps it away. So we still have what was flowing water is now ice, but maybe that's because it works in space more than it did before. I don't know, you tell us.

CC Well, just so we won't have to ask you

another question later, tell me again which side of the inner pane the fog was on?

SPT It was on the inside. You could wipe it off with your hand.

CC Okay. Thank you.

CC Skylab, Houston. We're about 30 seconds from LOS. We're gonna see you at Guam at 21:15.

PAO Skylab Control, 21 hours and 6 seconds Greenwich mean time. That's the end of the tape from Vanguard and Ascension passes that was recorded earlier. We just finished replaying the Vanguard and Ascension pass from this last revolution. You might have noticed during the conversation, there was some discussion of the operation of the coolant loop for tomorrow's EVA. Normally both coolant loops are operated, with two crew members using one of the coolant loops, and the remaining crewman using the other loop. Tomorrow they will not use both coolant loops. The ground flight controllers are concerned that the secondary coolant loop is still not being properly controlled for temperature by temperature control valve B, that's the control valve that had stuck in a rather cool position earlie. Tthey're not satisfied yet that is operating, although there is some disagreement as to whether it is or not. It's reading approximately 46 degrees, that's about 1 degree cooler than it's supposed to read. And they're concerned it may be stuck in that position, and may not correct itself. For this reason they'll be operating only on the primary coolant loop tomorrow. All three crew members using the same coolant loop. They will also not go to the EVA position. Normally there is a special EVA position, which allows greater cooling to the cooling systems inside the suits. That EVA position was used during the previous EVA to repair the solar panel. At that time the shock from the coolant coming in out of the radiators was severe enough to cause the primary coolant loop temperature control valve to freeze up. And for a while, we had some rather cold temperatures and some danger of freezing water in adjacent systems. For this reason they will not be using the EVA position. That means they will have reduced cooling on that primary coolant loop, so we'll have less cooling and a single coolant loop running. For this reason they suggested to the crew that they attempt to keep their body heat regulated and not allowed to build up and then try to cool off in a hurry. The indication they gave this, don't use position 5 if you can avoid it. Position 5 is the maximum flow rate on coolant. This is Skylab Control at 21 hours 2 minutes and 23 seconds. Our next acquisition of signal, in 12 minutes and 40 seconds at the Guam tracking station. Skylab Control at 2 minutes and 32 seconds after the hour.

END OF TAPE

[redacted] GIVEN TO CREW FROM COLORADO AEROTECH

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Time: 16:14 CDT, 25:21:14 GMT
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PAO Skylab Control at 21 hours 14 minutes Greenwich mean time. We're 1 minute from acquisiton of signal at the Guam tracking station and we'll remain live for air-to-ground and a call from Spacecraft Communicator Dick Truly. Fifty seconds to acquisition of signal at Guam.

CC Skylab, Houston. AOS at Guam for 10 minutes.

SC Roger.

CC Skylab, Houston. Star tracker is unlocked and we think we see - we think we see you trying to help us out in getting that reacquired. Outer gimbal should be plus 1980.

SPT Roger.

CC Skylab, Houston. I'm not sure what the other two guys are going. Joe, I guess, is at the ATM. If you're not doing anything and in a listening mood, I got a couple of news items that I'll read up to you.

SPT Go man.

CC Okay, first one here is a telegram that came to General Stafford today. And it says: "Colorado Aerotech, accredited under the state of Colorado, an aviation mechanics technology school being duly authorized by the Chairman of the Colorado State Board of Community Colleges, does hereby issue and grant the honorary degree, Master of Aviation Airframe Maintenance, to U.S. Navy Captain Pete Conrad; U.S. Navy Commander Joe Kerwin; and U.S. Navy Commander, Paul Weitz. This degree is presented for the outstanding efforts exercised in restoring the Skylab to an operational state under most adverse conditions, utilizing the most rudimentary airframe tools. In addition, each astronaut is recognized for his initiative and abilities as a truly first-rate airframe technician, operating in space, repairing and altering a spaceship." From Colorado Aerotech.

PLT You made that up.

CC Negative.

PLT Super.

CC One question I have for you guys. The other day when we were not reading your news up every night, did somebody pass you up information about the TU144 Supersonic Transport at the Paris Air Show?

PLT Yes, we did hear about that accident, Dick.

CC Okay, fine.

CC This is from Tokyo. A strong earthquake followed by a tidal wave hit the northern Japanese Islands Sunday, injuring at least 23 persons and carrying more than - causing more than five million dollars damage. About 300 tons of dead salmon were washed to shore by the 6-1/2 foot

tidal waves that followed the tremor. And the quake measured 7.25 on the Richter scale. In Washington today President Nixon and Soviet leader, Leonid I. Brezhnev, today begin a long planned summit conference, each pledging that the talks would improve the prospects for world peace. Brezhnev promised the week-long conference would justify the hopes of our people and serve the interests of a peaceful future for all mankind. Nixon predicted a conference would help lift the burden of armaments from the world and build a structure of peace. Here's one from Kyle, South Dakota. A leader of the American Indian movement told the Senate subcommittee on Indian Affairs Sunday, that the Indians want to be recognized as a sovereign nation in their own dealings with the Federal Government. The traditional Chief, Frank Fools Crow and Charles Redcloud, called for the removal of Stanley Lyman as Bureau of Indian Affairs Superintendent on the reservation. Redcloud said a lot of the money comes on to the reservation, but no one knows where it goes. Reacloud also asked that liquor be banned from the reservation. Finally, here from - here's one from Paris. American and North Vietnamese officials resumed talks on U.S. diplomatic aid to Hanoi today after a lapse of two months. "We seek a successful conclusion as the contribution to the consolidation of peace in southeast Asia. Ch ef U.S. delegate, Maurice Williams said: "The resumption of negotiations was agreed in a communique signed last Wednesday, pledging both sides to renewed commitments to peace in Viet Nam. We've still got about 3 minutes left here at Guam, and I'm standing by.

PLT Thank you.

CDR If we get that CBRM fixed tomorrow we ought to qualify for our Ph.D. in airframes.

END OF TAPE

CDR If we get that CBRM fixed tomorrow, we ought to qualify for our Ph.D. in airframe mechanics.

CC I would certainly think so.

CDR As a little update, we've got the D-1 brush duster-offer all installed on the VS tree, and cut off a hunk of the SEVA sail, and I'm about to go sew for awhile.

CC Okay. Fine.

CDR That might qualify me to join my wife in the Timber Cove Sewing Association.

CC I was just going to suggest that same thing.

CC Skylab, Houston. We're 1 minute from AOS. We're going to see you at Vanguard at 21:55. That will be the medical conference. The next pass after that is Canary at 22:15.

CDR Roger. See you then.

CC Roger.

PAO Skylab Control at 21 hours 25 minutes and 11 seconds Greenwich mean time. We have now lost signal at Guar tracking station, and do not expect to hear from the crew again until possibly at Vanguard. Vanguard is reserved 30 minutes from now for a private medical conference with the flight surgeon. Should the surgeon complete his conversation, we will have live air-to-ground in the event that there is any discussion between the crew and spacecraft communicator Dick Truly. So that next pass at Vanguard 29 minutes is reserved for a private medical conference, but we have over the last several days had some time for open air-to-ground. This is Skylab Control at 25 minutes and 56 seconds after the hour.

END OF TAPE

PAO Skylab Control, 21 hours 54 minutes and 4/ seconds Greenwich mean time. We have had acquisition of signal at Vanguard and are receiving t lemetry data here in Mission Control. At this time there is a private medical conference being conducted with Dr. Buchanan in a private room here in the Mission Control Center. That is not over live air to ground. This is our daily medical conference. If that should be completed before the Vanguard pass, which lasts something over ten minutes, then we should hear a call from spacecraft communicator, Dick Truly, to the crew. That normally has been taking place over the last several days about 4 or 5 minutes into the pass. We will remain live now for air to ground in the event that the private medical conference is a brief one. This is Skylab Control remaining live.

CC Skylab, Houston. We're standing by at Vanguard. We've got 6 minutes left in the pass.

CDR Okay. (garble)

SPT The SPT is trying for a rare perfect (garble)

CC Roger.

CDR Say, when I get back, I want to know how much time you all estimated for me to do this sail job.

CC Okay, I'll make sure that - I'll pass to Rusty and figure out what is it they thought.

CDR Okay, then I'll tell you how long it really took.

CC Okay.

SPT Houston, SPT. Does ATM want H-alpha to take pictures tonight?

CC Stand by 1.

CC SPT, Houston. Negative.

SPT Okay, I'm ready for my final exam.

CC Okay.

SPT And if the PIs are listening, we will have a final debriefing for them on Channel B a little bit later.

CC Okay, very good, then I'll sure alert them.

CC Skylab, Houston. two comments; for Joe, the ATM officer says that you got a B+, that the grating was to be 0000, and he's going to take care of that from the ground. And for the CDR, I'm advised by our EVA friends that the estimated time that they thought it would take you on that sail job was 15 to 30 minutes.

CDR Well, I've already invested about an hour and 15 in it, and I got about another half to go.

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Time: 16:54 CDT 23:21:54 GMT
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GC Well, sounds like we sure blew that one. Sorry! We're about 30 seconds from LOS at Vanguard. We're going to see you at Canary at 22:15, and we're going to dump the data tape recorder at Canary.

PAO Skylab Control, at 22 hours 6 minutes and 11 seconds. We have lost signal at Vanguard. We will have a very low elevation pass at Ascension and may not acquire there. Nine minutes from now, we should acquire signal at Canary Island. This is Skylab Control at 6 minutes and 27 seconds after the hour.

END OF TAPE

PAO Skylab Control at 22 hours 14 minutes 47 seconds Greenwich mean time. We are approaching acquisition of signal at the Canary Island tracking station off the east coast - west coast of Africa. And in 26 seconds we will have acquisition there. We will stay alive for air-to-ground and a call from spacecraft communicator, Dick Truly.

CC Skylab, Houston. We're AOS at Canary and Madrid for the next 13 minutes. The G&S at this site is going to be updating the 2-3 rate gyro for drift compensation. And Rusty had one note he wanted to mention to you at this pass. I'll turn it over to him.

SCHWEICKART CDR, vacuum division here.

PLT Go.

SCHWEICKART In the process of - I wonder what the status is on loading the film freezer. Are you trying to get that out of the way tonight?

PLT It's all done.

SCHWEICKART CDR, this is sort of a low priority one, but if you get a chance, we'd like to have you take a look at the aperture window - or maybe you already did on the S054 magazine, and see if the aluminum filter there at the entrance was still intact.

PLT He will.

SCHWEICKART Okay. Want to be a little bit careful in sliding back the spring-loaded plate there - not to do it too rapidly, but just bring it back cautiously and assure that there aren't any holes in it, and then let it slide forward slowly again.

PLT Roger.

PLT You want a picture there?

SCHWEICKART Negative. If there are any holes in it, we'd like to know about it and then we'll have to schedule putting - 54 mags, but we don't anticipate there will be any. We would like your recommendation, though, if there is any evidence of those.

PLT Okay. Well, I'll tell you, if we see any evidence of holes we'll probably put gray tape over them.

SCHWEICKART Okay.

CC Skylab, Houston; we're 1 minute from LOS at Madrid. We're going to see you at Guam at 22:54 for the last pass of the evening. See you then.

PLT Okay, Dick.

PAO Skylab Control at 22 hours 29 minutes and 4 seconds Greenwich mean time. We have lost signal at Madrid. That was a double pass at Canary Island and Madrid, and do

SL-II MC-[illegible]
Time: 17:1[illegible] CDT, 22:2[illegible]:1[illegible] GMT
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[illegible]ot expect to acquire the space station again until 24 minutes and 40 seconds from now, at which time we should hear the final call of the day from spacecraft communicator, Dick Truly, as we hear a good-night from the crew at Guam. That will come in approximately 24-1/2 minutes, and that will be our last pass for today. This is Skylab Control at 22 hours 29 minutes and 33 seconds G.m.t.

END OF TAPE

SL-II MO-1.189/1
Time: 17:52 CDT 25:22:52 GMT
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PAO Skylab Control at 22 hours 52 minutes 53 seconds Greenwich mean time. We are approaching acquisition of signal at Guam for the last pass of the day. Expect to hear a call from spacecraft communicator Dick Truly any moment now, as we reach acquisition at Guam. This is Skylab Control, remaining live for air-to-ground from Guam.

CC Skylab, Houston. We're AOS at Guam for 7 minutes.

PLT Say, Richard.

CC Go ahead.

PLT There's a very bright star, which is probably a planet, up near the moon. By near, I mean it's within about 10 to 15 degrees of the moon. Now, could you have somebody find out what it is.

CC Sure will. Stand by.

CC Skylab, Houston. On the question you had about the planets, both Mars and Jupiter are in that area of the sky. Jupiter is the planet that's closest to the constellation Nunki, and we think - two-starred Nunki - and we think that it's probably Jupiter that you see.

PLT Okay. Don't think it's bright to be Mars. Thank you.

CC Roger, and we're about 45 seconds from LOS here at Guam. We'll see you guys in the morning. The first pass is about 15 minutes after you wake up. And it'll be a Honeysuckle pass, and you all have fun tomorrow on the EVA.

PLT Sure will, and good night.

CC Roger. Good night.

PAO Skylab Control at 23 hours 1 minute 18 seconds Greenwich mean time. We have lost signal at Guam tracking station. Our next acquisition is at Honeysuckle in about 3 minutes and 43 seconds. However we did have a "good night" from spacecraft communicator Dick Truly over Guam and do not expect to hear from the crew again this evening. Today was the last full day of experimental activity aboard the Skylab space station. Two members of the crew, Dr. Joseph Kerwin and Commander Pete Conrad, were subjects of medical investigations that test the effect of weightlessness on fluids normally contained in the lower half of the body and on the physical effort required to perform work on a bicycle ergometer. After a busy day sharing the study of the Sun with Paul Weitz, Dr. Kerwin closed out the manned operation of the solar telescope and associated instruments. After film is retrieved by Pete Conrad from the telescope mount's cameras during 3 hours of

work outside the space station tomorrow, three of the solar instruments, including the white light coronograph, the X-ray spectrographic telescope, and the ultraviolet spectrometer will continue operations during the unmanned period of the mission. That is to say beyond Friday we will still be receiving data for approximately 16 hours a day from three of the ATM instruments. Some 2 hours were spent today preparing for tomorrow's activity outside the space station. In addition to retrieving and replacing film and camera assemblies from the solar telescope mount, Commander Conrad will hammer on a dead battery for the telescope mount solar array. The battery has been out of order since before the crew first arrived at the space station. Paul Weitz will assist Conrad, while Kerwin works inside the station tomorrow morning. Kerwin is expected to use the television camera, shooting through the windows of the structural transition section and the command module during part of the period of the EVA. That EVA tomorrow morning begins at 11:40 Greenwich mean time, or 6:40 a. m. central daylight time, and it is expected to continue for 3 hours. That is the final pass of the day; we do not expect to hear again from the crew. This is Skylab Control at 3 minutes and 35 seconds after the hour.

END OF TAPE

SL-II MC-[illegible]/1
Time: [illegible] CDT, 23:23:27 GMT
6/18/73

PAO: Skylab Control at 23 hours 27 minutes and 19 seconds Greenwich mean time. At the present time we believe the crew is asleep. We are out of range of tracking station. We did not get any report from Honeysuckle, the last tracking station after a good-night at the previous station. We now have the surgeon's report. It is as follows: "The general health and attitude of the Skylab 2 astronauts is good. They are looking forward to the EVA tomorrow and are apparently feeling physically ready for their tasks." Signed: Dr. Buchanan for Dr. Hawkins. That concludes the surgeon's report from the private medical conference tonight, and this will be the final message from Skylab Control until approximately 2:00 a.m. tomorrow morning. This is Skylab Control at 28 minutes after the hour.

END OF TAPE